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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,250	11/20/2001	Robertus Mominicus Joseph Verhaar	NL 000627	9630

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EXAMINER

LUU, CHUONG A

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,250

Applicant(s)

VERHAAR ET AL. 

Examiner

Chuong A Luu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

PRIOR ART REJECTIONS

Statutory Basis

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The Rejections

Claims 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al. (U.S. 6,225,162 B1).

Lin discloses a method of fabrication a stacked-gate flash memory cell with

(1) a substrate having a patterned ONO insulating layer over a portion thereof, and characterized by the steps of forming an insulating layer comprising an Oxide-Nitride-Silicon layered structure on the substrate, applying a photoresist to the silicon surface as part of a patterning process and stripping the photoresist once a required patterning process has been completed subsequently re-oxidizing the silicon layer of the remaining Oxide-Nitride-Silicon structure so as to form an ONO insulating layer structure (see column 5, lines 10-65. Figures 2c and 2i);

(6) wherein the silicon layer is re-oxidized into a thermal oxide (see column 5, lines 50-60).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (U.S. 6,225,162 B1) in view of Prinz et al. (U.S. 6,133,093)

Lin discloses everything above except for wherein the silicon layer comprises an amorphous silicon layer. However, Prinz discloses a method for forming an integrated circuit with **(2)** wherein the silicon layer comprises an amorphous silicon layer (see column 5, lines 16-34). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the above teachings to fabricate a semiconductor device to exceed its performance criteria.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (U.S. 6,225,162 B1) in view of Shrivastava et al. (U.S. 6,133,602)

Lin teaches the above outlined features except for wherein a non-volatile memory cell is applied as part of the semiconductor structure, which non-volatile memory cell employs the ONO insulating layer between a floating gate and control gate thereof. However, Shrivastava discloses a method of fabricating a semiconductor device with **(3)** wherein a non-volatile memory cell is applied as part of the semiconductor structure, which non-volatile memory cell employs the ONO insulating layer between a floating gate and control gate thereof (see column 3, lines 51-62); **(4)** wherein a non-volatile memory cell is applied with a control gate formed from a conductive layer which also serves to form part of a peripheral semiconductor structure (see column 3, lines 51-62); **(5)** wherein the subsequent oxidation of the silicon sub-layer of the Oxide-Nitride-Silicon insulating layer takes place also to provide a high voltage oxide layer for a peripheral structure (see columns 5 and 5, lines 7-17 and lines

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21-40, respectively). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the above teachings to fabricate a semiconductor device to exceed its performance criteria.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong A Luu whose telephone number is (703)305-0129. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (703)308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

CAL
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April 21, 2003

~~SECRET~~
~~PRIMARY EXAMINER~~

C. Everhart
CARIDAD EVERHART
PRIMARY EXAMINER